

Weekly Report

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Projects

Huawei Large Graph Project

Last week we discussed about the debug approaches due to the limitations from Huawei that we cannot use several Java packages outside the company. This week I was implementing a set of dummy packages that provide the same interfaces as the packages from Huawei. Therefore we could debug the backend locally with a tiny set of testing graph data.

Visual SVM

The goal of this view is to depict the manifold of the support vectors and their classification probabilities at the same time. We intend to visualize the local patterns of the non-linear decision boundary and then present the relations between multiple SVM models in different local regions.

Several snapshots of the view are shown in Figure 1 and 2. As presented in Figure 1, support vectors from two classes are marked as blue and orange dots (blue for class “-” and orange for class “+”). The coordinates of the dots on xy plane represents the ISOMAP projection result of the support vectors. Furthermore, the coordinates on z axis are mapped to the probability of the support vectors that belong to the class “+” (illustrated in Figure 2).

A demo can be accessed at `{http://icie.me:8000/static/3dview.html}`. It takes about 10 to 30 seconds to load the data depending on the network speed.

Plan for the Next Week

The 3D view is currently implemented separately and has not embedded in to the Visual SVM system. In the next week I will

- put the view into the system, and
- link the selection of dots among other views.

Additionally, I will draw a new pipeline of the entire paper and refine the contributions proposed in the former paper.

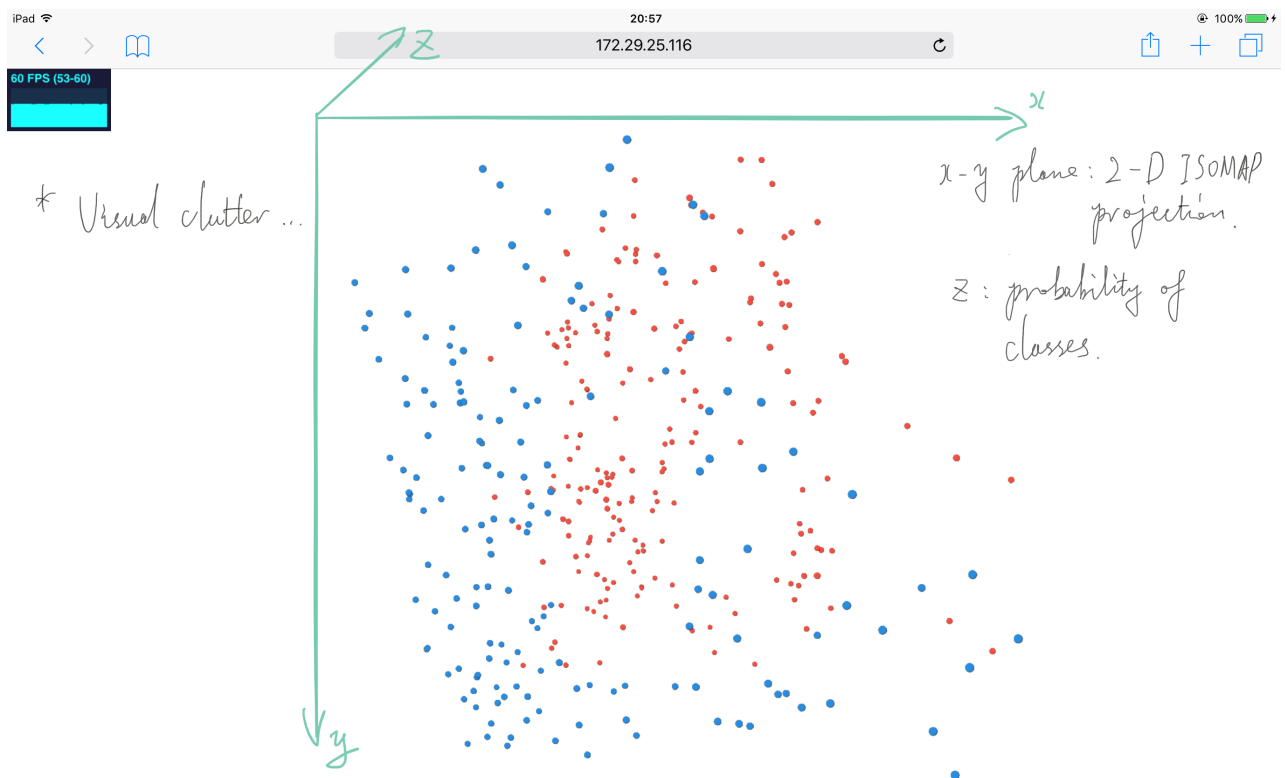


Figure 1: 3D projection view.

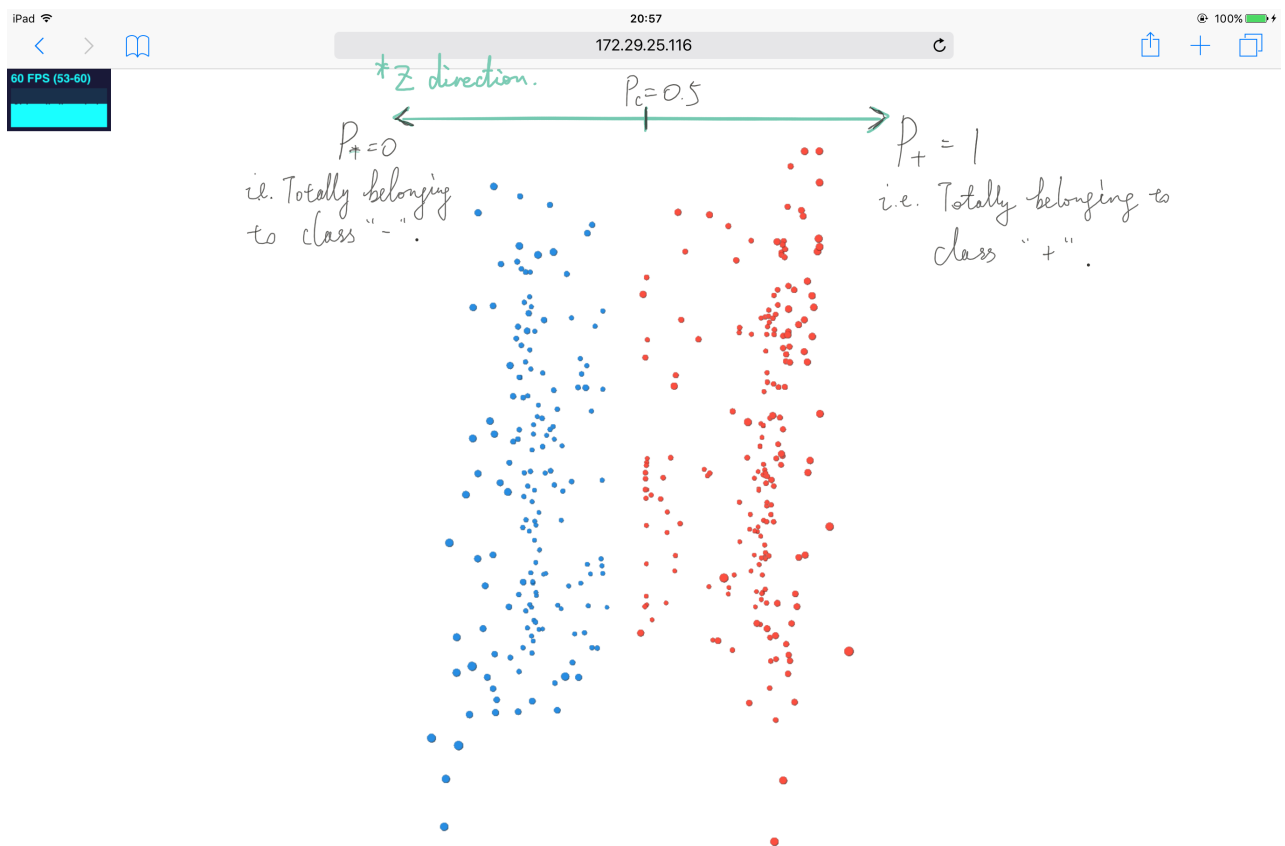


Figure 2: Z axis of the 3D projection view. The viewport is changed from the Figure 1 by rotation.